

This book is all about laboratories and leaves, lizards
and llamas, and lots of other exciting L's.

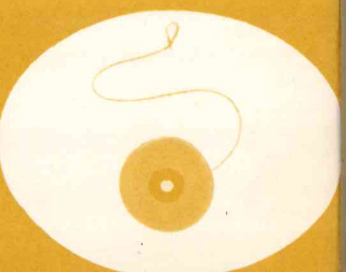
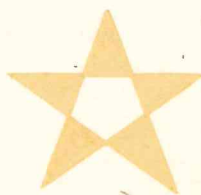
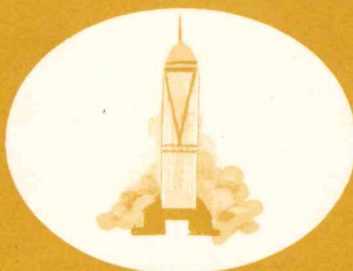
a Golden Book



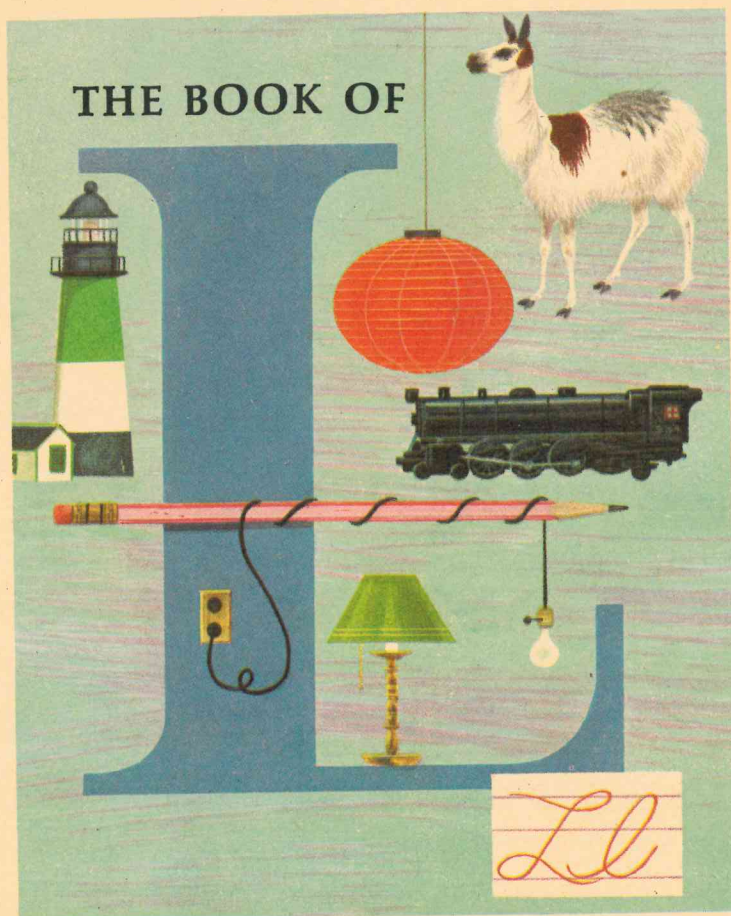
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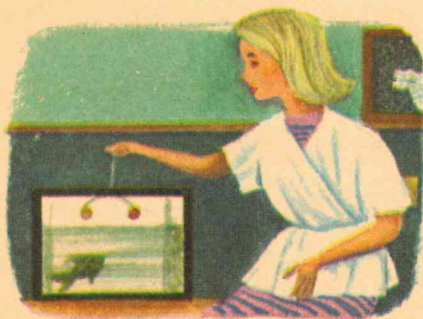
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laboratory

A laboratory is a room
where scientists work.
Scientists do different
kinds of work.



Some study rocks.
Some study plants.



Some study animals.
Some study stars.
There are many sciences.
(See *science* in the first S book.)



Scientists have different kinds
of laboratories.

In their laboratories
they carry on experiments.

They have a great deal
of laboratory equipment
to work with.

Most laboratories have outlets
for electricity
and sinks for running water.

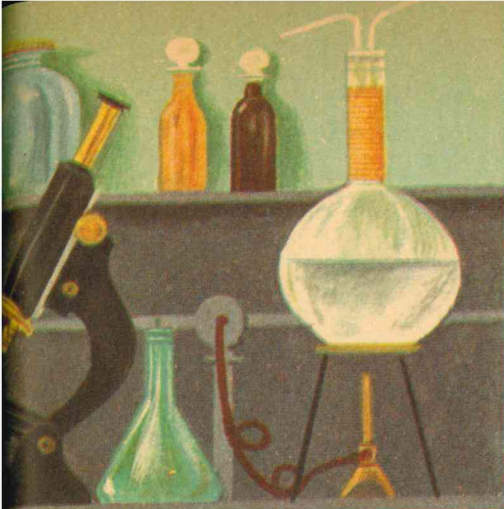
Most of them have long tables.

They have stools
for the scientists to sit on.

On top of the tables
are machines
and tools and containers.

Scientists often heat things.

They may use gas burners
called Bunsen burners.

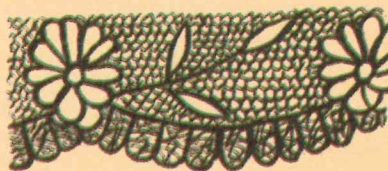


lace



Lace is pretty.
It is made of thread.
So is cloth.
But lace is more open
than cloth.

Brides like to have veils
made of lace
or trimmed with lace.



Most lace today
is made by machine.
But the finest lace
is still made by hand.
Tatting is a handmade lace.
The thread is wound on
a shuttle, or bobbin.
The shuttle is moved swiftly
in and out among threads
in the lacemaker's fingers.

Scientists sometimes
heat things in glass
so they can see what happens.
They use special glass
that does not break
when it gets hot.
They have glass containers
of different kinds—
flasks and bottles
and beakers
and test tubes.
Scientists measure things.
They may have scales
or calipers
or other tools for measuring.
A scientist may have helpers
in his laboratory.
They are called
laboratory assistants.



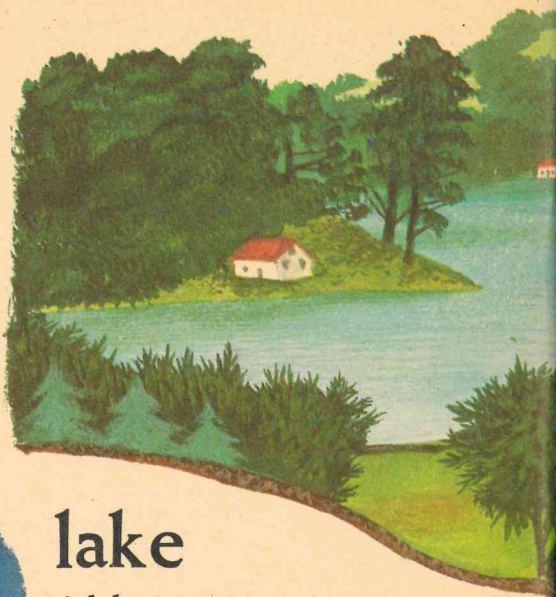
Some fine lace
is made
by twisting threads around
pins stuck in a pillow.
The pins mark the pattern.
Making beautiful lace
is hard work for the eyes.



In olden days gentlemen
as well as ladies
wore lots of lace.

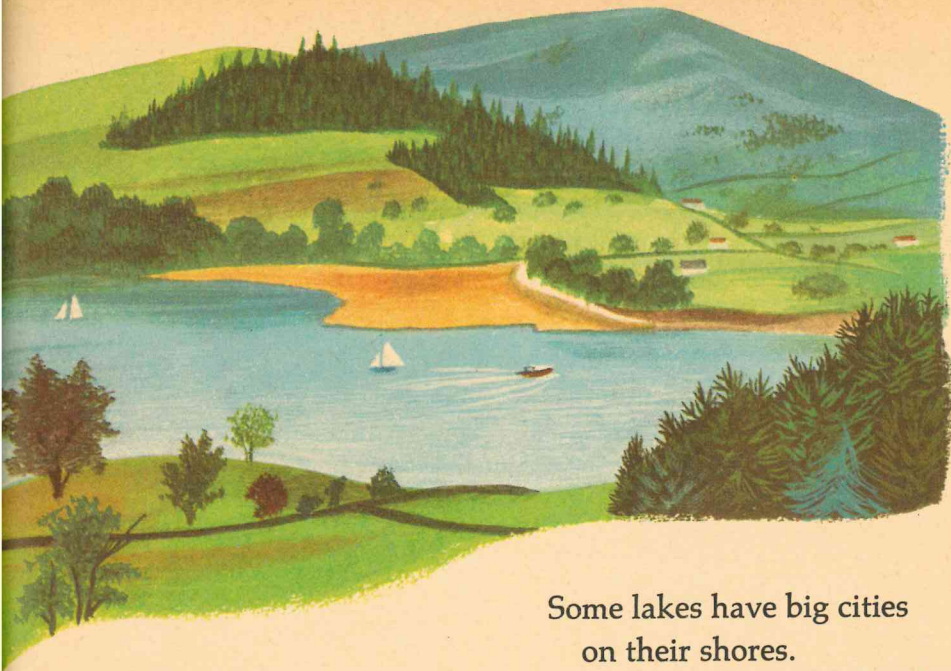
lady

A lady is a woman
who is pleasant
and thoughtful
and nice to be with.
A little girl
can grow up to be
a lady.



lake

A lake is water
with land all around it.
A very small lake
may be called a pond.
A very large lake
may be called a sea.
Most lakes get their water
from rains
and melting snows.
Streams bring the water
to the lake.
Most lakes have rivers
running out of them.
The rivers carry lake water
to the oceans far away.



Some lakes are high
in the mountains.

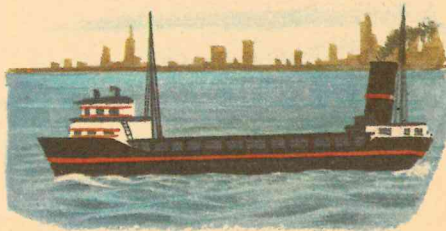


Some lakes are low
in the desert.



Their water may be salty.

Some lakes have big cities
on their shores.



Big ships cross these lakes
to the cities.

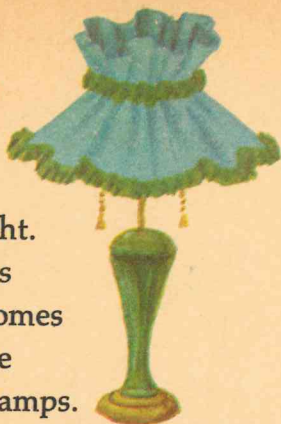
Some lakes are better
for small boats—rowboats
or canoes.

Many people spend vacations
at cottages on lakes.

They swim and boat and fish
and have a happy time.

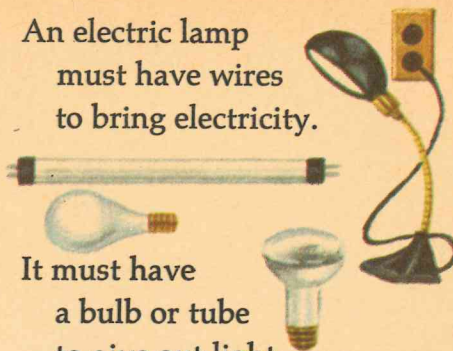
lamp

A lamp
gives light.
Most lamps
in our homes
today are
electric lamps.



They may be
on walls or ceilings.
Some lamps
stand on tables.
We call them table lamps.
Some stand on the floor.
We call them floor lamps.
We can move these lamps about.

An electric lamp
must have wires
to bring electricity.



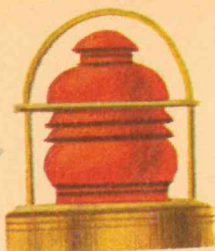
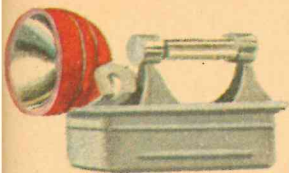
It must have
a bulb or tube
to give out light.



Before the days of electricity,
lamps burned gas
or kerosene or other oil.
The oil traveled up a wick.
Some had glass chimneys.
Some had pretty shades as well.
Very early oil lamps
were just little bowls
that held the oil and wick.



lantern



A lantern

is a light in a case.

We may use a lantern

to see by out-of-doors.

The case protects the light.

Long ago people

carried torches

of burning sticks or reeds

to light their way at night.

But rain or wind

could put out a torch.

So they began to put

a covering around the flame.

Most of our lanterns

have covers of glass.

Some lanterns

have covers

of paper.

Japanese lanterns do.

They are very pretty.

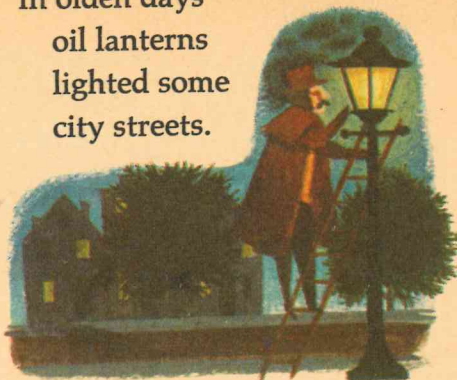
Some Japanese lanterns

have fireflies inside

to give the light.



In olden days
oil lanterns
lighted some
city streets.



Gas lamps took their place.

A lamplighter had to light
each lamp when evening came.



Now most street lights
are electric.

So are automobile headlights
and many hand lanterns.

A lantern tower
beside the sea
is called a lighthouse.

A lantern floating on the sea
is called a light buoy.

Lighthouses and light buoys
warn sailors of rocks.

laundry



We wash our clothes,
linens and towels
to make them clean.

We call these things laundry
when we wash them.

We say we launder them.

We may send our clothes
to a big laundry.



A laundryman picks them up.

Or our mother may
wash them herself
in a washing machine.

She puts the clothes in.

She adds soap powder.

She closes the door.

She turns on the machine.

Water runs in.

The clothes swish around.

Soon they are clean.

Maybe our mother
uses a drying machine, too.

She puts in the wet clothes.

She turns on the machine.

Soon they are dry.

In most lands,
mothers do not have
machines like ours.



They may use washtubs.

They may rub clothes
on washboards
to get the dirt out.

They hang the clothes out
to dry on clotheslines,
or they spread them out
in the sun.



In some lands, all the women
of the village
do their laundry together.

They take their clothes
to the village fountain.

They have a good visit
while they wash.

Or they may go to a river
or a lake.

They may wash their clothes
on the stones
along the bank or shore.

They spread out their clothes
in the sun to dry.

In some places,
washermen wash clothes
in bundles.

They lift the wet bundles
and slam them down on rocks
time after time
to loosen the dirt.

They press the clothes smooth
with flatirons
filled with hot coals.

In every land,
people like to have
nice, clean clothes
to wear.

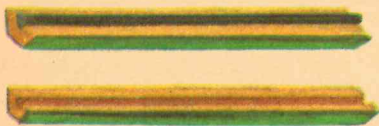


lead pencil

A lead pencil is to write
and draw with.

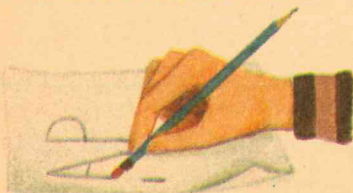
Lead is a heavy gray metal.
But really there is no lead
in a pencil.

The black is graphite.
It is mixed with clay,
squeezed out thin
and baked.



The hard stick of graphite
is put into a sandwich
of wood.

The two pieces of wood
are stuck together.
The pencil is painted.
Sometimes an eraser
is added at one end.



If you make a mistake,
you can rub it out
with the eraser.



leaf

In the summer most leaves
are green.



But there are some red leaves
and yellow leaves
and spotted leaves.



In the fall many leaves
change color.
Leaves are not all
the same size.



Palm leaves are very big.



Clover leaves are little.

Leaves are not all
the same shape.

Water Lily



Redbud

Some are round.
Some are heart-shaped.
Some are long and narrow.

Pine



Many evergreen trees have
leaves so long and narrow
that they are called needles.
Some leaves are shaped
like mittens.



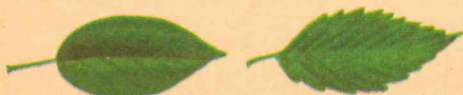
Sassafras

Some leaves are made up
of little leaflets.



Staghorn Sumac

This is just one leaf
of a sumac bush.



Osage Orange

Elm

Some leaves have smooth edges.
Some have edges like a saw.

Olive



Blackjack Oak



A leaf always has veins in it.
Veins are tiny pipes
for carrying water and food.

The veins in a leaf
make a pattern.

They do not all
make the same pattern.

A leaf is a tiny factory.
It makes food for the plant
it grows on.

Sugar is one of the foods
a leaf makes.

It uses water and a part
of the air to make sugar.

A factory has to have energy
to make it run.

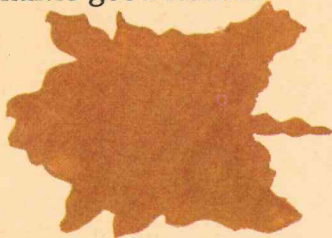
A leaf factory gets its energy
from sunshine.



Locust

leather

Leather is made
from animal skin.
The skin or hide of cows,
goats and pigs
makes good leather.

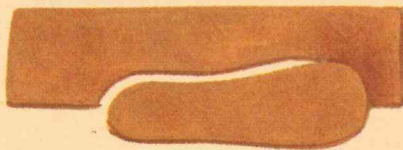


So does the skin of alligators
and crocodiles and of some
snakes and lizards.



The skin must be cleaned
and scraped.
Then it is tanned.
It may be soaked
in a mixture made
from the bark
of certain trees.
It may be tanned
in other ways.
After the tanning,
the skin is treated with oil.

Leather may be thick and stiff.
Or it may be thin and soft.



Shoe soles are made
from thick, stiff leather.

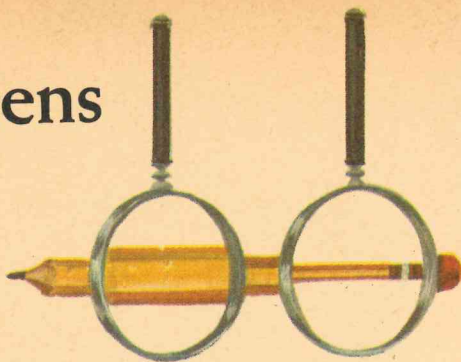


So are some suitcases.



Gloves and ladies' shoes are
made from soft, thin leather.
Some leather is rubbed
to look like soft cloth.
It is called suede.
Some leather is polished
to shine.
Good leather lasts a long time.

lens



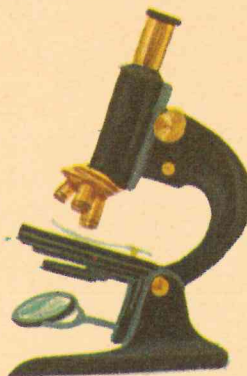
A lens is usually
made of glass.
It has a special shape.
When we look at things
through a lens,
they look bigger or smaller.
A lens thick in the middle
makes things look bigger.
We say it magnifies.
A lens thin in the middle
makes things look smaller.
Our eyes have lenses inside
to help us see well.
Of course, these lenses
are not glass.



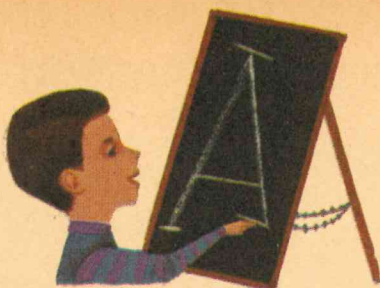
Eyeglasses have lenses.
They make people see better.
Cameras have lenses.



Telescopes have lenses.
A telescope helps us see
the moon and stars better.



Microscopes have lenses.
A microscope helps us see
tiny things better.
Scientists use lenses
in many ways.
Some use microscopes.
Some use telescopes.
Some use other instruments
with lenses in them.
Scientists learn many things
by using lenses.



letter

The alphabet is made up of letters.

(See *alphabet* in the A book.)

Every word in this book is made up of letters.

There is another kind of letter.

A letter brings us news from someone.

Or we may

write a letter

to tell someone how we are,

to say, "Thank you,"

or to send our love.

We fold the letter

and put it

in an envelope.

We write on the envelope

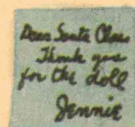
the name of the person

the letter is for.

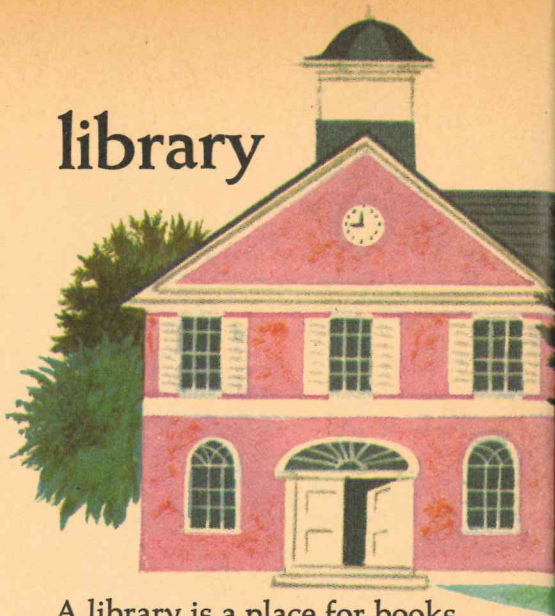
We write where he lives.

And we mail the letter.

(See *mail* in the M book for what happens then.)



library



A library is a place for books.

Some homes have a book room called a library.



You may have a library corner in your own room.

There have been libraries

as long as there have been books.

(See *book* in the B book.)



Some libraries are on wheels.
They are called bookmobiles.
If you live in the country,
a bookmobile may come.
You can borrow books.
You can return those
you have read.



Some libraries are huge.
You can read books all your life.
There will always be more
for you to read!

Most towns have a library.
You get a library card.
It has your name on it.
Then you can borrow books
from the library.
There is a librarian
at the desk.
The librarian will help you
choose a book if you wish.
There are lots and lots of books
on shelves.
There are tables with chairs
just the right size
if you want to sit and read.
This is fun.
A library is a friendly place
to go to.

light



We need light to see by.
Daylight is light
 we get from the sun.
The sun is very bright.
Its light falls on a flower.
The light bounces
 from the flower to our eyes.
We see the flower.
Sunlight falls on a friend's face.
The light bounces from the face
 to our eyes.



We see our friend.

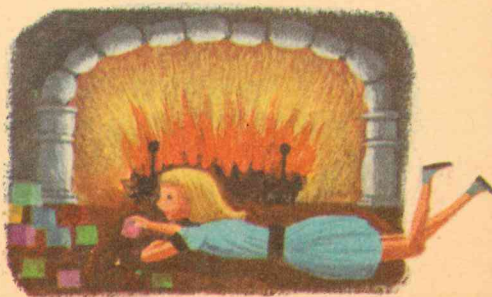


In shadows
 where sunlight is not strong
 we do not see so well.

At night
 the sun is not shining
 on our part of the earth.
(See *day and night* in the D book.)
But it may be shining
 on the moon up in the sky.
The sunlight bounces
 from the moon to our eyes.



We see the moon.
Stars are like our sun.
They give bright light, too.
But stars are very far away.
We cannot see to do things
 by their light.
The sun and stars give light
 because they are hot—
 hotter than fire.
Fire gives light, too.



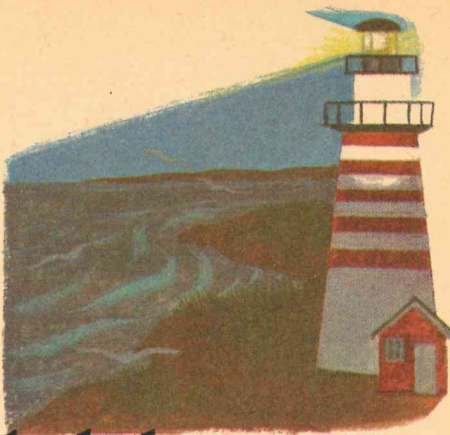
Candlelight is firelight.



Electric light bulbs give light
because wires inside them
get white-hot.



When the light falls
on an open book at night,
light bounces to our eyes.
And we can see to read.
Wherever there is light
to light up the dark,
we can see.

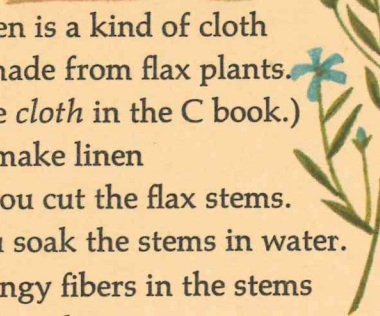


lighthouse

A lighthouse is a tower
that has a big light
at the top.

It warns ships
of rocks and sandbars.
A lighthouse keeper
keeps the light burning.
He may sound a foghorn, too.
When it is hard
to see the light
through the fog or storm,
sailors will hear
the deep voice
of the foghorn.
They will know that rocks
or shallows are near.
(See *fog* in the F book
and *lantern* in this book.)

linen



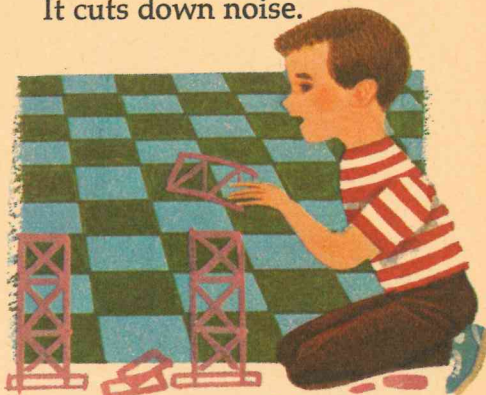
Linen is a kind of cloth
made from flax plants.
(See *cloth* in the C book.)
To make linen
you cut the flax stems.
You soak the stems in water.
Stringy fibers in the stems
come loose.
You comb these fibers straight.
You stretch them out.
While they are wet,
you spin them into thread.
This is linen thread.
You can weave it into cloth.



Heavy linen cloth makes sails
for sailboats.
It is called sailcloth.
Fine linen makes handkerchiefs
and tablecloths and napkins.
Linen makes pretty tea towels
and suits and dresses, too.

linoleum

Linoleum covers floors.
It is easy to clean.
It cuts down noise.

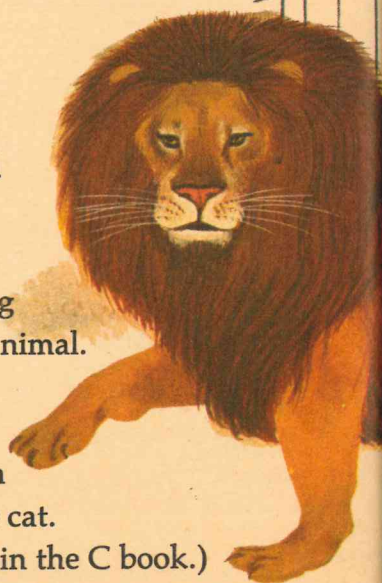


Linoleum is good for rooms
where children play.
It is good for kitchens, too.

lion

The lion
is a big
wild animal.
It is
a
cousin
of the cat.

(See *cat* in the C book.)



The lion is called
the king of beasts.
It has a loud roar.
The father lion
has a mane of heavy hair
on his neck and head.
The mother lion
is called a lioness.
She has no mane.
The mother lion
takes care of the babies.
They are called cubs.
You can see lions
in almost any circus or zoo.
Most lions come from Africa.



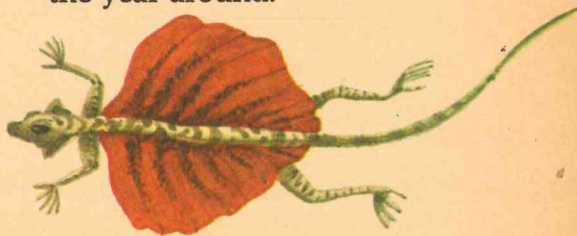
lizard



Lizards are reptiles.
They are related
to alligators, crocodiles,
turtles and snakes.

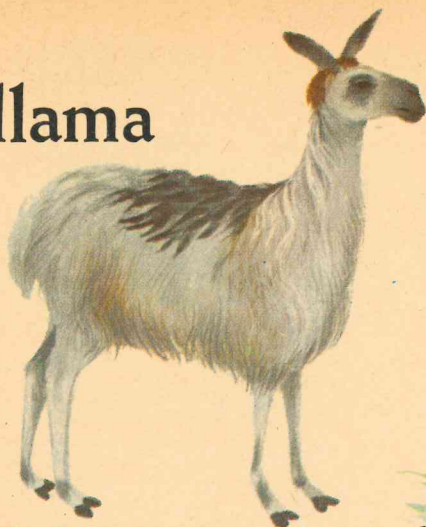


Most lizards live
where it is warm
the year around.



Lizards can run fast.
The flying dragon can almost fly.
Some lizards are rather large.
But all lizards of today
are tiny compared with
their giant dinosaur cousins
of long ago.
(See *dinosaur* in the D book.)

llama



The llama is a mountain animal.
It lives in the high Andes
in South America.

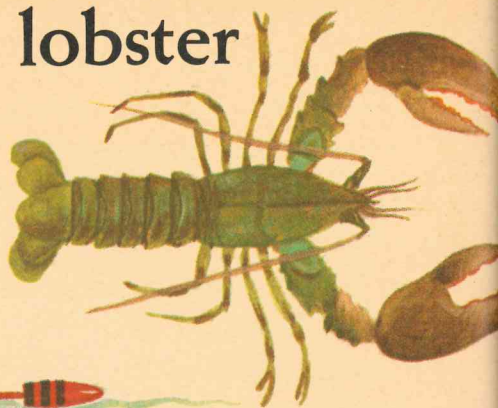
The llama has been tamed.
We say it is a domestic animal.
It carries heavy loads.

Its wool makes good cloth.
The llama has a wild cousin
called the vicuña.

Vicuñas are very, very shy.
Their wool is fine and soft.
It makes soft, warm cloth
that is light and beautiful.



lobster

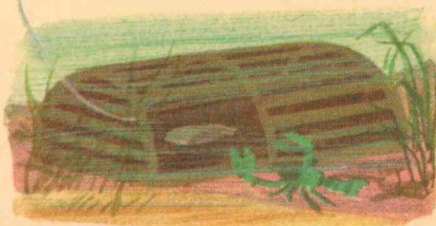


A lobster is a sea animal.
It has a hard covering.

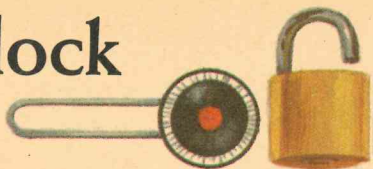
As it grows,
a lobster sheds its hard coat
and grows a bigger one.

Lobster meat is good to eat.
Lobster fishermen put down
lobster pots to catch lobsters.

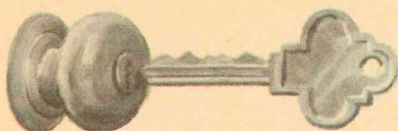
They put dead fish in them.
Lobsters eat dead fish.
They walk into the pots.
Then they cannot walk out again.
They are trapped.



lock



A lock closes a door or box
so it cannot be opened easily.
Most locks need a key
to open them.

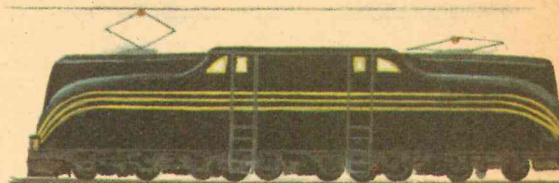


locomotive



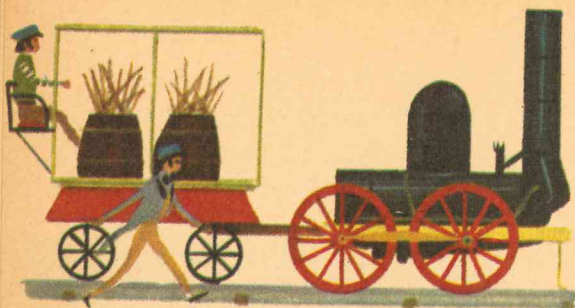
A locomotive is an engine
that runs a train.
The most modern locomotives
are Diesel-electrics.
Diesel engines burn oil
to make electricity.
The electricity drives
the locomotive.

Older kinds
of electric locomotives
get their electricity
from distant power plants.



The electricity may come
to these locomotives
through wires overhead.
It may come to them
through a third rail
running along the track.

The earliest locomotives
had steam engines.
They were steam locomotives.
They had a firebox.
The fire boiled water.
The water boiled into steam.
The steam pushed parts
that turned the wheels.



Early steam locomotives
were small.

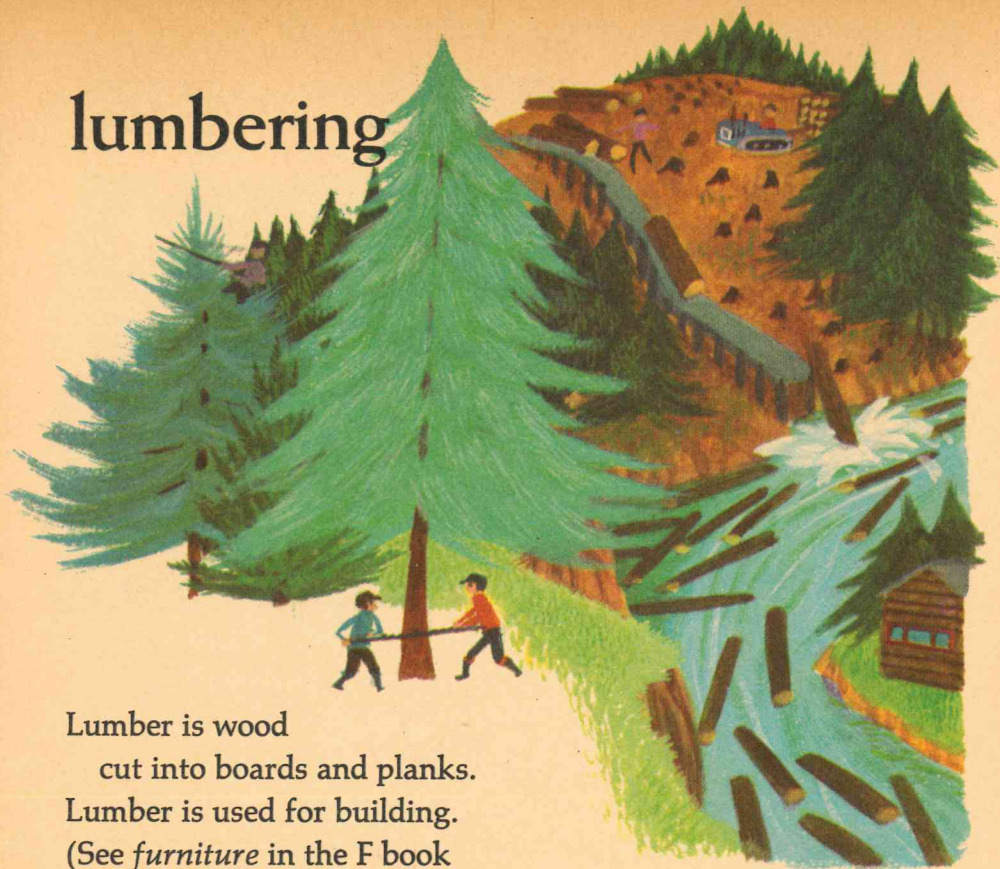
Steam locomotives
used a lot of water.
Big water tanks stood
beside the tracks
to fill the boilers
of the locomotives.



Later ones were big
and powerful.
They used a great deal of coal.
A coal car came
behind the locomotive.
So it was easy to shovel
more coal into the firebox.

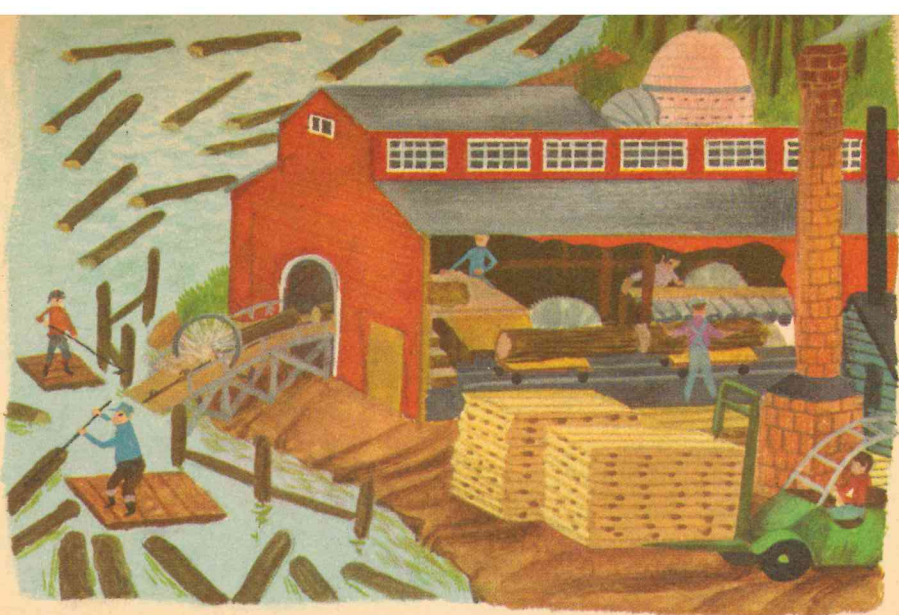
A steam locomotive had a bell.
The engineer could ring it.
A steam locomotive
had a whistle, too.
When the engineer pulled a cord,
the whistle blew.
What a wonderful sound!

lumbering



Lumber is wood
cut into boards and planks.
Lumber is used for building.
(See *furniture* in the F book
and *house* in the H book.)
Trees are cut in the forest
by men called lumberjacks.
The men live in lumber camps.
They sleep on bunks
in a bunkhouse.
They eat in the cookhouse.
Some cut branches
from tall trees.
Some saw through the trunks
of trees
to make them fall.

When a tree falls,
it is sawed into logs.
The logs are hauled away
on a truck.
Or a lumberjack with a tractor
takes the logs
to a little narrow railroad
or to a river.
He may slide them down a slide
into the river.
The logs float
down the river to the sawmill.



At the sawmill,
the logs are split by saws.
They are cut into neat pieces
of lumber.
Each one is a special size.
The lumber is stacked up
so that air can reach it.
The wood dries out.
It is ready to use.

Trucks and trains carry it away
to towns and cities.
Every city and town
has a lumberyard.
The lumberyard has stacks
of boards and planks
of many sizes.
It has lumber
from different kinds of trees.
There you can buy
all the wood you need
to build a house.

